

Serial No. 10/671,856, filed Sept. 25, 2003
Docket No. 1107348-0008
Page 6 of 12

REMARKS

I. Amendments

Claims 11, 12, 14, and 16-21 have been amended to more particularly recite what Applicants regard as the invention, and to provide antecedent basis for all terms and expressions in these claims. Claims 1-10 and 13 have been canceled.

Independent claim 11 has been amended to more particularly describe the structure of the first coupler member. Claim 12, which depends on claim 11, has been amended to further define the structure of the first coupler member by reciting that the height of the stem is less than the depth of the recess. Dependent claim 14 has been amended in view of the amendments to earlier claim 11, and to depend upon claim 12. Claim 16 has been amended to recite that the portion of the stem having an enlarged section is pre-formed prior to coupling with the second coupler member.

Independent method claim 17 has been amended to include amendments similar to those made to claim 11. Dependent claim 18 has been amended to further define the coupling step.

Support for these amendments to these claims can be found in the application as originally filed, and in particular on page 5, lines 28-30, which reads "The head 62b of the stem 62 ... may remain within the recess 64, depending on application." In addition, Figures 6 and 6a shows that the head 92b of the stem 92 remains within the recess 94.

Claim 19 has been amended to recite that the hole has a region having an enlarged cross-section. Support for this amendment is provided by Figures 4-6 and by the specification at page 6, lines 6-10, which disclose a connection section 72a of the rim 72 where the hole has a larger diameter.

Claim 20 has been rewritten in independent form, and amended to more clearly define the step of snapping the two couplings together. Dependent claim 21 has been amended in view of the amendments to claim 20 and further recites the enlarged section of the hole as in claim 19.

New claim 22 has been added. Claim 22 recites that the step of providing the first coupler member forms the stem such that a distal end of the stem remains within the recess. Support for claim 22 is provided by claim 11 as amended.

Serial No. 10/671,856, filed Sept. 25, 2003
Docket No. 1107348-0008
Page 7 of 12

Upon entry of this Amendment, claims 11, 12, and 14-22 are pending. No new matter has been added by any amendment herein.

II. Rejection under 35 U.S.C. § 112, second paragraph

Claim 19 is rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for a lack of antecedent basis for the term "the stem". Claim 17, upon which claim 19 depends, has been amended to provide antecedent basis for the term. Accordingly, withdrawal of the rejection of claim 19 is requested.

III. Rejection under 35 U.S.C. § 102(e)- Bosco

Claims 1-4, 6, 11-14, and 16-18 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by US 6,578,680 to Bosco et al. ("Bosco"). Claims 1-4, 6, and 13 have been canceled and therefore the rejection with respect to these claims is moot and should be withdrawn. Applicant submits that Bosco does not anticipate the invention of amended claims 11, 12, 14, and 16-18.

Bosco purports to disclose a staple for assisting in the coupling of a shim to a first side surface of a backing plate in a brake assembly (Abstract). As shown in Figure 1, the staples 50 and 50' are separate elements from the backing plate 60 and shim 40. As discussed in the instant specification at page 1, paragraph [0006], there are significant drawbacks to the use of staples or pins in brake assemblies.

In contrast to Bosco, the present invention as defined by the amended claims does not use staples or separate elements but rather first and second coupler members. These first and second coupler members are provided as part of the backing plate and shim, respectively, and facilitate efficient engagement of the backing plate and shim without the use of extra parts. The present invention does not use or employ staples as described by Bosco.

Accordingly, the invention of claims 11, 12, 14, and 16-18 is not anticipated by Bosco. Withdrawal of the rejection of claims 11, 12, 14, and 16-18 under 35 U.S.C. § 102(e) is requested.

Serial No. 10/671,856, filed Sept. 25, 2003
Docket No. 1107348-0008
Page 8 of 12

IV. Rejection under 35 U.S.C. § 102(b)- Weiler

Claims 1, 2, 11, 12, and 17-19 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by US 5,427,213 to Weiler et al. ("Weiler"). Claims 1 and 2 have been canceled and therefore the rejection with respect to these claims is moot and should be withdrawn. Applicant submits that Weiler does not anticipate the invention of amended claims 11, 12, 14, and 17-19.

Weiler discloses a brake pad for disc brakes in which the brake pad comprises a damping plate attached to the reverse face of a lining carrier plate. Weiler discloses projections on the lining carrier plate which extend into apertures in the damping plate. (Abstract) Weiler states that "[t]he external ends 14 of said projections 4, 5, 6 are widened by means of a wobble riveting so that they overlap the damping plate 3 at their sides and urge it against the lining carrier plate 1" (col. 4, lines 13-17). That is, as clearly seen from Figure 3, the projections are formed over the surface of the carrier plate 1, and the external ends 14 are widened after the damping plate 3 is placed over the lining carrier plate 1. The external ends protrude over the damping plate 3.

In contrast to Weiler, the present invention as described by the amended claims uses a first coupler member formed on the back surface of the backing plate and having a stem and a recess surrounding the stem. As shown by Figures 4-7, the protrusions in the present invention are surrounded by a recess, and the protrusions remain subsurface both before and after coupling of first and second coupler members. Weiler does not disclose protrusions surrounded recesses, or protrusions which will remain subsurface of the lining carrier plate, as acknowledged by the Examiner on page 3 of the Office Action.

Accordingly, at least this feature of the claimed invention is not disclosed by Weiler. Consequently, the invention of amended claims 11, 12, 14, and 17-19 is not anticipated by Weiler, and withdrawal of the rejection of these claims under 35 U.S.C. § 102(b) is requested.

IV. Rejection under 35 U.S.C. § 103(a)- Weiler

Claims 3-10, 13-16, 20, and 21 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Weiler. Claims 3-10 and 13 have been canceled, and therefore the rejection

Serial No. 10/671,856, filed Sept. 25, 2003
Docket No. 1107348-0008
Page 9 of 12

with respect to these claims is moot and should be withdrawn. Applicants submit that Weiler does not teach or suggest the invention of claims 14-16, 20, and 21.

Claims 14-15

With regard to claims 14 and 15, the Examiner alleges that Weiler discloses in Figs. 4 and 5 having a first coupling member with a recess in which the rim of the second coupling member is received. The Examiner further alleges that it would have been obvious to recess the stem of Weiler in order to make the back surface of the shim flush so that it would be easier to install. Claim 14 recites that the distal end of the stem has an enlarged section which mates with a larger section of the hole. Claim 15 depends on claim 14.

Applicants agree with the Examiner that Weiler does not disclose a recess surrounding the stem. Weiler discloses in Figs. 4 and 5 an embodiment having depressions 21, 22. However, the embodiment disclosed in Figs. 4 and 5 is incompatible with the wobble riveting projection 5 disclosed in Figs. 1-3. In this regard, the depressions 21, 22 are to allow the tongues 22, 23 to hook underneath of overhangs 24, 25 as seen in Figure 5. The embodiment of Figs. 4 and 5 does not contain any rivetable structures, and therefore this embodiment cannot be combined with the riveting embodiment shown in Figs. 1-3. These two embodiments have entirely different structures, and cannot be combined to obtain the claimed invention.

Weiler does not disclose or suggest combining wobble riveting with overhangs and tongues. Furthermore, even if one skilled in the art tried to combine these embodiments, he would still fail to reach the invention of claims 14 and 15 since there is no guidance or motivation in the riveting embodiment of Weiler to form a recess around the projection. Accordingly, Weiler cannot suggest or provide any motivation to make the invention of claims 14 and 15.

Claim 16

Regarding claim 16, the Examiner has taken the position that it would have been obvious to form the stem of Weiler using any method as such is merely a design choice.

Weiler uses wobble riveting to secure the shim to the backing plate. Weiler states that "[t]he external ends 14 of said projections 4, 5, 6 are widened by means of wobble riveting so

Serial No. 10/671,856, filed Sept. 25, 2003
Docket No. 1107348-0008
Page 10 of 12

that they overlap the damping plate 3 at their sides" (col. 4, lines 13-16) and clearly shows the shape of protrusions in Figure 12. Accordingly, in order to attach the damping plate 3 to the lining carrier plate 1 at the same time as leaving a space between them, Weiler must widen the external ends of the projections *after* the damping plate 3 is attached.

In contrast to Weiler, in claim 16, the enlarged section of the stem is preformed on the stem *prior* to coupling with the second coupler member of the shim. Weiler's disclosure cannot suggest preforming an enlarged section of the stem, and teaches away from the provision of providing the enlarged section prior to coupling with the second coupler member as recited in claim 16. Accordingly, Applicants respectfully submit that Weiler cannot render claim 16 obvious.

Claims 20 and 21

With respect to claims 20 and 21, the Examiner alleges that it would have been obvious to attach the shim to the backing plate using any well known method. Applicants reply that the structure of the invention of claims 20 and 21 is not merely a design choice, but is innovative and not suggested by the prior art.

Applicants appreciate the Examiner's statement that Weiler does not disclose connecting a shim and backing plate by a snapping-in action using the simple structures as recited in claims 20 and 21. Applicants further state that Weiler does not disclose or suggest any snapping connection using a stem having an enlarged section which remains within the recess of the backing plate. All of Weiler's embodiments require riveting (Figures 1-3 and 9-12) or a complicated tongue and overhang structure (Figure 4 and 5).

If the structure of the Applicants' friction system were a simple design choice, it would have been adapted by other manufacturers, or at least suggested by Weiler, but such is not the case. As discussed above, Weiler teaches against Applicants' snapping-in design. Therefore, the claimed invention cannot be an obvious variation of Weiler.

Accordingly, the claimed invention is neither disclosed nor suggested by the cited prior art. Withdrawal of the rejection of claims 14-16, 20, and 21 under 35 U.S.C. §103(a) is respectfully requested.

Serial No. 10/671,856, filed Sept. 25, 2003
Docket No. 1107348-0008
Page 11 of 12

V. US 2004/013725 to Bosco et al. ("Bosco '725")

Applicants are concurrently submitting an Information Disclosure Statement to disclose U.S. patent application publication no. US 2004/0134725 A1, published on July 15, 2004 in the name of Bosco et al. ("the '725 application").

The '725 application discloses the use of extending pins 30, 31 on the backing plate 16. The '725 application states that "after deformation all of the pins are below the top surface of shim 40" (page 3, paragraph [0038]). It is clear that the '725 application uses riveting, and that prior to deformation, the pins 30, 31 protrude over the surface of shim 40 and thus over the surface of backing plate 16, as seen in Figure 2. The protruding pins 30, 31 increase the overall volume of the backing plate and make handling of the plate more cumbersome prior to assembly with the shim. In this regard, a brake pad 18 is typically mounted on the backing plate 16 prior to assembly with the shim, and protruding pins 30, 31 would require a more complicated mechanism to support the backing plate 16 while the brake pad 18 is being mounted.

By contrast, the present invention as claimed in amended independent claims 11 and 17 requires that the distal end of the stem remains within the recess. That is, there are no stems protruding over the surface of the backing plate at any time, either prior to or after the shim is assembled. By providing such a structure, the backing plate can be handled as a flat material at all times, such as during pad mounting and shipping, thereby facilitating handling.

Amended independent claim 20 recites a method that provides a first coupler member having a stem with an enlarged section, and snaps the enlarged section of the stem into the hole of the second coupler member.

The '725 application fails to disclose or suggest providing a pin below the surface of the backing plate within a recess, or using a snapping-in action to assemble the shim on the backing plate.

Serial No. 10/671,856, filed Sept. 25, 2003
Docket No. 1107348-0008
Page 12 of 12

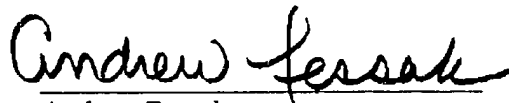
CONCLUSION

Upon entry of this Amendment, claims 11, 12, and 14-22 are pending. Applicants respectfully submit that claims 11, 12, and 14-22 are in condition for allowance, which action is earnestly solicited.

Authorization is hereby given to charge any fee which may be due in connection with this communication to Deposit Account No. 23-1703.

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Respectfully submitted,



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